Chapter 10: Energy Use in the Transportation Sector

For additional charts and graphs related to transportation energy use, please refer to the *Kansas Energy Chart Book*, Chapter 10 (http://kec.kansas.gov/chart_book/).

Overview

Between 1980 and 1997, the total Vehicle Miles Traveled (VMT) in the United States increased 63 percent, and was more than double what it was in 1970. In addition, VMT growth continually exceeds population growth, and, between 1980 and 1997, it was also greater than employment and economic growth. The Federal Highway Administration (FHWA) predicts that the light-duty VMT will grow at an annual rate of more than 2 percent for the next 20 years, leading to a 53 percent increase in vehicle miles traveled.

This steady growth in VMT strains the existing roadway network and increases emissions and congestion, particularly in the urban areas. Strategies to reduce VMT are key to reducing the environmental impact of greater dependence on automobiles.

The growth of VMT in Kansas is consistent with the national VMT growth: every year the rate of VMT continues to increase. Factors such as greater work commutes, urban sprawl, and induced traffic all contribute to the state's VMT growth. Between 1982 and 1996, Kansas City had a population increase of 23 percent, while the vehicle miles traveled in the area increased by 79 percent.

Changing driver behavior with respect to driving habits and speed can also reduce fuel usage. Although individual vehicles reach their optimal fuel efficiency at different speeds (or range of speeds, gas mileage generally decreases rapidly at speeds above 60 mph. In general, each 5-mph increase in speed increases fuel consumption by 7–23% (or the equivalent of paying $0.20 per gallon more for gas, assuming price is $2.31).[1]

With respect to the trucking industry, reducing the amount of time that trucks idle is another significant step toward reducing fuel usage. Argonne National Lab estimates trucks idle about 6 hours a day. Idle reduction technologies can save an estimated 838 million gallons of diesel fuel nationally each year. Reduced idling time will also result in reduced nitrous oxide, carbon monoxide, and carbon dioxide emissions.[2]

Existing Policies and Programs

1. The Kansas State Vanpool Program (K.S.A. 75-46a03) is a transportation program for state employees "to promote conservation of petroleum resources, reduce traffic and parking congestion, and diminish air pollution by facilitation

[1] Driving More Efficiently: U.S. Department of Energy and Environmental Protection Agency www.fueleconomy.gov website (http://www.fueleconomy.gov/feg/driveHabits.shtml).
[2] Except where noted otherwise, this section is based on data from Energy Use in the Transportation Sector: Prepared for the Kansas Energy Council (KEC), by the KU Transporation Center, June 15, 2006, available on the KEC web site (http://www.kec.kansas.gov/reports.htm).

the creation of self-supporting commuter vanpools in which state employees living and working in similar locations may ride to and from their places of employment." The Secretary of Administration sets the passenger fee for each vanpool so that it is self-supporting. Currently, the program consists of 21 vehicles owned and registered by the state, transporting approximately 250 people daily.

2. The Kansas City Area Transit Authority (KCATA) operates 37 park-and-ride locations along various bus routes throughout Kansas City.

3. The University of Kansas opened a new park-and-ride facility at the edge of campus in Lawrence to provide for connection to a campus circulator service and potentially as a transfer point for regular city service and for bus service between Johnson County and Lawrence.

4. K.S.A 8-1558 states that it is a violation of State law to speed as little as one mile per hour over the posted speed limit. However, State statute also states that speed violations of 10 mph (or less) over the speed limit in 55- to 70-mph zones will not count as moving violations on individual's driving records.

5. The Energy Policy Act of 2005 provides for federal income tax credits for the purchase of hybrid electric vehicles. The tax credit for hybrid vehicles applies to vehicles purchased or placed in service on or after January 1, 2006. The amount of the credit for a given model varies and the full credit diminishes once the manufacturer has sold 60,000 hybrid vehicles. According to the IRS, "consumers seeking the credit may want to buy early since the full credit is only available for a limited time." [3]

6. The Corporate Average Fuel Economy (CAFE) program, regulated by the National Highway Traffic Safety Administration (NHTSA) and the Environmental Protection Agency (EPA), aims to reduce energy consumption by increasing the fuel economy of cars and light duty trucks.

[3] Internal Revenue Service, Hybrid Cars and Alternative Motor Vehicles: http://www.irs.gov/newsroom/article/0,,id=157632,00.html (updated November 22, 2006).